

Cooperative Satellite Learning Project (CSLP)

A Partnership in Education

Executive Summary Briefing

"Empowering Students Through The Magic of Spaceflight"

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Introduction



What is CSLP?

"The Cooperative Satellite Learning Project (CSLP) is an established, award-winning partnership in education empowering a diverse group of students through the magic of spaceflight"

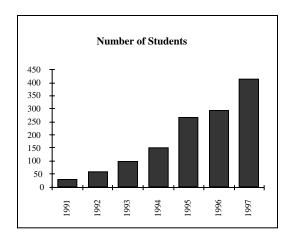
- Established in 1990
- High School-Based K-12 Education Pipeline Program
- Responsive to the Strategic Direction of Education in the U.S.
- Led by AlliedSignal and supported by NASA and other businesses
- Empowering students with new business, technical, and interpersonal skills through active involvement in space missions
- Providing critical insights into the application of knowledge, careers, and the business environment
- And improving their confidence and self-esteem

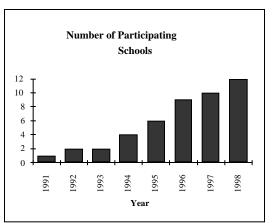
Background



Est. 1990 As A Volunteer-Based Community Service Project. . . .

CSLP has grown to twelve schools in five states involving over 450 students per year.





The Experience of 9 Years, 12 Schools, Over 2000 Students, and a Dozen Partners



Guiding Principles. . . .

The CSLP Program Model has been guided by three principle methods for motivating students to learn:

- Motivation Through Hands-On Involvement
- Motivation Through Contribution
- Motivation Through Peer Learning

Diverse groups of Students are directly involved in various aspects of the mission, performing hands-on activities, contributing to missions success, and conducting public and student outreach.



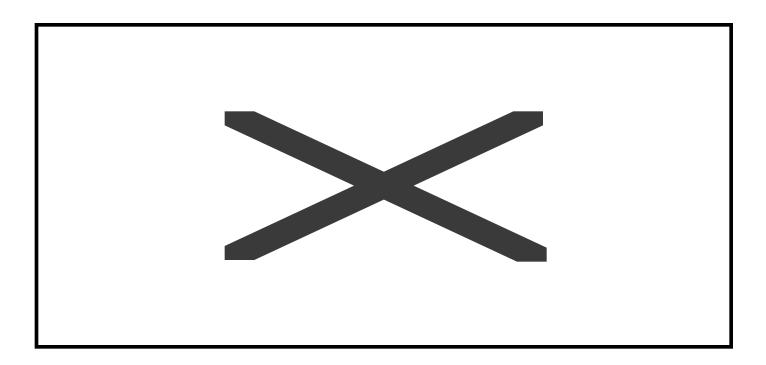
Program Objectives. . . . Through Space Missions:

- Expose students to science and engineering
- Expose students to a variety of technical and non-technical careers
- Develop modern business skills
- Build self esteem and confidence
- Develop and apply a systems approach to complex tasks
- Learn to leverage Information Technology

Developing eQ (emotional) and iQ (intellectual) skills



The Model and Its Components. . . .



Students follow the Mission through its development and into operations, providing a "project-oriented, applied knowledge" experience.



Special Projects. . . . Hands-On Applications

Outreach	Technical	Business
	Satallita Maakun	
Video Productions	Satellite Mockup	Project Planning
Newsletter	MMS Design, Development,	Special Project Group
Web Site	and Operations	Activities
.,, 55 ,550	Satellite Data Processing	Program Tracking and
Feeder School Programs	Launch Operations	Accounting
Community Events	Activities	Student Conferences

Students Learn



Space Mission Component Component Component Componen Componen Componen Self Esteem Componen C

Student Development...

- Mission Development Process (program)
- Satellite Subsystems (engineering)
- Satellite Payload & Research Objective (science)
- Mission Ground System (Information Technology)

Critical Business Skills

- Project Planning & Management
- Group & Leadership
- Total Quality Management
- Documentation
- Presentations & Public Speaking
- Civic Responsibility

The classroom is run "like a business environment"

CSLP builds self-esteem and confidence in students

- Skills to Tackle Complex Systems
- Leadership and Planning Skills
- Interpersonal and Public Speaking Skills
- Expert Knowledge
- Accomplishments Beyond Their Own Expectations

Links Technology to Basic Academics

- Information Technology
- Basic Electronics
- Application of Physics in: Orbital Mechanics
- Structures
- **Pointing Control**
- Thermal Management
- Earth & Space Science
- Computer Science
- Data Processing

Students of all Professional Persuasions

- Technical and Non-Technical
- It takes all types of careers to run a project

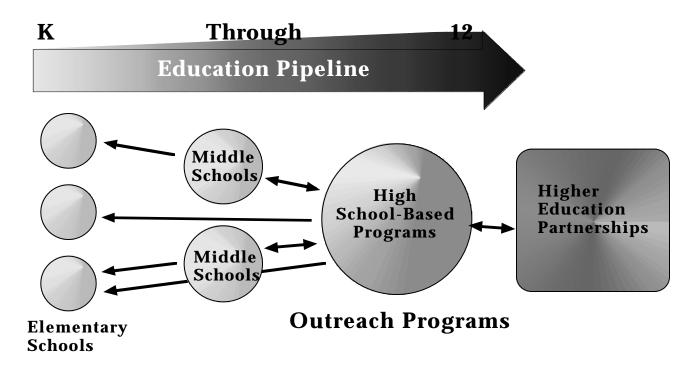
Students are exposed to professionals in a variety of career fields

Students learn how different careers work together to form a project team



CSLP and the Education Pipeline. . . .

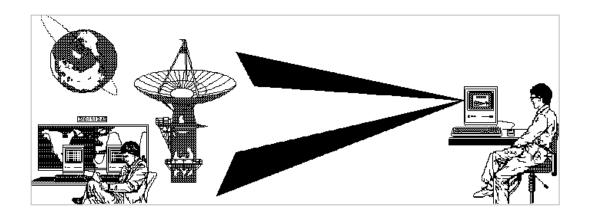
High School-Centric Program Addressing the K-12 System





Space Mission Model Component. . . .

Involving the students directly in the mission throughout the mission life cycle.



School-Based "Mission Monitoring System" (MMS)

CSLP National Mission Statement



The Cooperative Satellite Learning Project (CSLP) will motivate students regardless of age, race, or sex into science, engineering, math, and computers; educate students, and the community about space science; and prepare students for careers after school, through hands-on involvement in scientific missions.

CSLP National Goals



- 1. CSLP will provide students with opportunities to become involved with missions or space science.
- 2. CSLP will support student learning through outreach projects, where students learn by teaching the rest of the school, other schools, and the general community.
- 3. CSLP will use new technologies to promote education.
- 4. CSLP will encourage the development of partnerships with businesses, education institutions, students and the community at large.
- 5. CSLP will prepare students for the future work force, by developing the skills required for professional careers.
- 6. CSLP will support local, state, and national efforts to reform science, mathematics and technology education.
- 7. CSLP will encourage community involvement in education, and will educate the community by distributing, and presenting information about space science.
- 8. CSLP will provide teachers a resource for developing space science education programs and partnerships.
- 9. CSLP will provide the science community a resource for developing space science outreach/education programs, and partnerships.